U.S. Department of Transportation
Federal Highway Administration

Memorandum

Subject: **ACTION**: Conversion of Traffic and Pedestrian Signals to Light-Emitting Diode (LED) Technology

Date: **February 6, 2006**

From: Jeffrey F. Paniati */s/ Jeffrey F. Paniati*
Associate Administrator for Operations

Reply to
Attn. of: HOTM-1

To: Divisions Administrators

The Energy Policy Act of 2005, passed last August at about the same time as SAFETEA-LU, contains provisions related to energy efficiency requirements for traffic and pedestrian signals in section 135. The intent of these provisions is to promote energy conservation by facilitating the conversion of traffic and pedestrian signal equipment from incandescent bulb technology to light-emitting diode (LED) technology. These provisions require that traffic and pedestrian signal modules manufactured or imported after January 1, 2006 meet or exceed specific energy efficiency requirements, which currently can only be met by equipment using LED technology. The legislation does not impact existing stock of product on hand by either suppliers or public agencies, and does not cover replacement parts for signals that use traditional incandescent technology. Further, public agencies that own and operate traffic signals are not required to retrofit their incandescent signal equipment.

Staff from the Office of Operations have been working closely over the past several weeks with staff from the Department of Energy (DOE), AASHTO, the National Electrical Manufacturers Association (NEMA), the Institute of Transportation Engineers (ITE) and the American Public Works Association (APWA) to ensure that there is a shared understanding of the Energy Policy Act requirements and their potential impact on public agencies that own and operate traffic signals. Because there is no requirement to replace existing traffic signals using incandescent technology with LED technology and since the availability of incandescent replacement parts will not immediately be adversely affected, we believe the impacts will not be severe. Based on surveys conducted by ITE and AASHTO, a large proportion of new traffic signal installations are already being designed to use LED technology and conversion of existing traffic and pedestrian signals is also progressing at a rapid pace across the United States because of the significant energy cost savings that can be realized. The primary challenges associated with conversion projects appear to be the availability of funding for the capital costs associated with purchase of new equipment and resolution of some technical issues associated with interfacing LED technology with older traffic signal equipment.

We request your assistance in alerting the owners and operators of traffic signals in your State to the Energy Policy Act requirements and their implications. To facilitate this, attached is the following material:

- A copy of section 135 of the Energy Policy Act (pages 31-41). The material pertaining to this issue is found on pages 33, 35, and 38.
- A copy of the October 18, 2005 *Federal Register* notice from DOE outlining changes to 10 CFR to implement the legislative requirements contained in section 135 of the Energy Policy Act.
- A copy of relevant material from the EPA EnergyStar program.
- A copy of the current ITE specification covering LED traffic signal equipment (an update to this standard is expected to be published later in 2006).
- Summary points regarding this issue prepared following a stakeholder meeting on this issue held January 12, 2006 in Washington, DC .

Please share this information with stakeholders in your State. Please also let stakeholders know that there will be a national webcast sponsored by the National Transportation Operations Coalition (NTOC) on February 23, 2006 to share information on this issue. Interested parties should visit http://www.ntoctalks.com/web_casts.php to register. A discussion forum will also be held at the ITE Technical Conference in San Antonio on March 20. For meeting information, visit www.ite.org. We are still considering the need to pursue additional outreach sessions or development of technical guidance on this subject.

For additional policy information on this issue, please contact Jeff Lindley at (202) 366-1285. For technical assistance from the Resource Center, please contact Martin Knopp at (708) 283-3514.

Attachments

cc: Directors of Field Services, Joyce Curtis, Operations Council

FHWA:HOTM:JLindley:x61285:jmc:2/3/2006
cc: HOP-1 HOTM-1(JLindley)
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